

species which are so closely allied. The stomach has the same form, but the pylorus is furnished with one appendage only, and the intestine makes in its lower course four bends, two to the right and two to the left. The network of the mucous membrane is less close and the folds are lower. The liver consists only of the left lobe and the transverse bridge, but the bulky right lobe, which in *Bathysaurus ferox* forms the greater part of the liver, is entirely absent in this species. The specimen described is a male possessing a narrow tape-like testicle on each side of the posterior half of the abdominal cavity.

### *Bathypterois.*

*Bathypterois*, Günth., Ann. and Mag. Nat. Hist., 1878, vol. ii. p. 183.

Shape of the body like that of an *Aulopus*. Head of moderate size, depressed in front, with the snout projecting, the large mandible very prominent beyond the upper jaw. Cleft of the mouth wide; maxillary much developed, very movable, much dilated behind. Teeth in narrow villiform bands in the jaws. On each side of the broad vomer a small patch of similar teeth; none on the palatines or on the tongue. Eye very small. Scales cycloid, adherent, of moderate size. Rays of the pectoral fin much elongated; some of the upper being separate from the rest and forming a distinct division. Ventral fins abdominal, with the outer rays prolonged, eight-rayed. Dorsal fin inserted in the middle of the body, above or immediately behind the root of the ventral, of moderate length. Adipose fin present or absent. Anal short. Caudal forked. Gill-openings very wide; gill-laminæ well developed, separate from each other; gill-rakers long. Pseudobranchiæ absent.

Mr. Murray<sup>1</sup> observes about these fishes (*Bathypterois longipes*):—"When taken from the trawl they were always dead, and the long pectoral rays were erected like an arch over the head, requiring considerable pressure to make them lie along the side of the body; when erected they resembled Pennatulids like *Umbellula*." If we had any evidence of some deep-sea fish feeding on Pennatulids, we might suppose that the function of those rays consisted in attracting other fishes. But in the absence of such evidence, I am inclined to regard them as organs of touch.

*Bathypterois longifilis* (Pl. XLVII. fig. B; Pl. XLVIII. fig. B).

*Bathypterois longifilis*, Günth., Ann. and Mag. Nat. Hist., 1878, vol. ii. p. 183.

B. 12. D. 13. A. 9. P. 3 | 13. V. 8. L. lat. 61. L. transv. 6 | 10.

The uppermost pectoral ray is the strongest, longer than the whole fish, bifid towards its extremity. Outer ventral rays with dilated extremities. Dorsal fin inserted immediately behind the root of the ventrals. An adipose fin.

<sup>1</sup> Narr. Chall. Exp., vol. i. p. 218.